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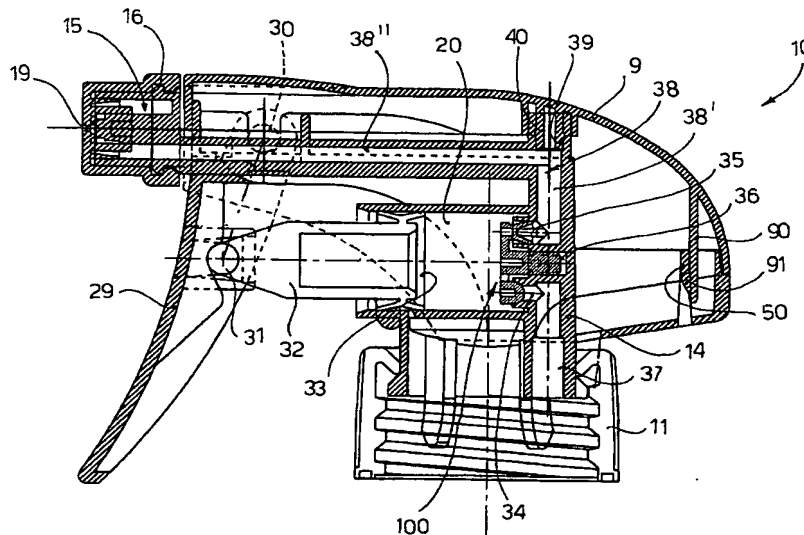
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— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE,

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(54) Title: **SIMPLIFIED SPRAYER DEVICE**



(57) Abstract: A sprayer device (10) with a trigger pump (29) comprises a substantially L-shaped body (14) that can be applied to a container for liquids and is provided with a sprayer nozzle (15). A chamber (20) wherein a plunger (33) of the pump slides, an input duct (37) which puts the container into communication with the chamber and an output duct (38) which puts the chamber into communication with the nozzle are formed to inside the body. A suction and delivery valve (100) which allows the suction of the liquid from the inside of the chamber and the delivery of the liquid from the chamber to the sprayer nozzle is installed in the chamber of the sprayer body. The stem (32) of the plunger of the pump is operated by a trigger (29) biased by a spring (60).

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Other drawbacks are due to the spring which biases the trigger, which is generally disposed inside the body of the piston. In fact said spring is obliged to have a spiral shape and, being in contact with the product, must be made of AISI steel. These characteristics make it excessively costly.

Furthermore, the spring disposed inside the piston body limits the volume of product delivered during spraying.

EP-0.850.695 discloses a dispenser for liquid products according to the preamble of claim 1. In particular, such a dispenser comprises a valve member having a collar portion received and held in a complementary groove which is formed in the dispenser body. Such an arrangement is complex and not reliable.

The object of the present invention is to overcome the drawbacks of the prior art by providing a sprayer device with a trigger-operated pump which is extremely reliable and able to ensure a perfect operation, avoiding problems of failures, and jamming of the valve of the pump.

Another object of the present invention is to provide a sprayer device provided with a spring for the trigger of the pump that is cheap, practical and efficient.

These objects are achieved, according to the invention, with the characteristics listed in appended independent claim 1.

Advantageous embodiments of the invention are apparent from the dependent claims. The sprayer device with trigger-operated pump according to the invention comprises a substantially L-shaped body that can be applied to a liquid container and is provided with a sprayer nozzle.

Formed inside the body there are a chamber wherein a pump plunger slides, an input duct which puts the container into communication with the chamber and an output duct which puts the chamber into communication with the sprayer nozzle.

5      Disposed in the chamber of the sprayer body there is a suction and delivery valve to generate a first one-way passage between said input duct of the sprayer body and said chamber and a second one-way passage between said chamber and said output duct of the sprayer body.